so familiarly grasp them, the minuteness of the researches into which he there set the first example of entering, is no less calculated to produce a corresponding impression. Whichever way we turn our view, we find ourselves compelled to bow before his genius, and to assign to the name of NEWTON a place in our veneration which belongs to no other in the annals of science. His era marks the accomplished maturity of the human reason as applied to such objects. Every thing which went before might be more properly compared to the first imperfect attempts of childhood, or the essays of inexpert, though promising, adolescence. Whatever has been since performed, however great in itself, and worthy of so splendid and auspicious a beginning, has never, in point of intellectual effort, surpassed that astonishing one which produced the Principial.

(302.) In this great work, Newton shows all the celestial motions known in his time to be consequences of the simple law, that every particle of matter attracts every other particle in the universe with a force proportional to the product of their masses directly, and the square of their mutual distance inversely, and is itself attracted with an equal force. Setting out from this, he explains how an attraction arises between the great spherical masses of which our system consists, regulated by a law precisely similar in its expression; how the elliptic motions of planets about the sun, and of satellites about their primaries, according to the exact rules inductively arrived at by Kepler, result, as necessary consequences, from the same general law of force; and how the orbits of comets themselves are only particular cases of planetary movements. Thence proceeding to applications of greater difficulty, he explains how the perplexing inequalities of the moon's motion result from the sun's disturbing action; how tides arise from the unequal attraction of the sun as well as of the moon on the earth, and the ocean which surrounds it; and lastly, how the precession of the equinoxes is a necessary consequence of the very same law.

(303.) The immediate successors of Newton found